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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,848	06/22/2001	Robert C. Newman JR.	P99-16	8629

7590 01/29/2007  
Patent Department  
Lutron Electronics Company, Inc.  
7200 Suter Road  
Coopersburg, PA 18036-1299

EXAMINER
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TRAN, THUY V

ART UNIT	PAPER NUMBER
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2821

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/887,848

Applicant(s)

NEWMAN ET AL.

Examiner

Thuy V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE filed 11/28/06 & Petition 8/18/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14, 15 and 17-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-36 is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/28/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office Action is responsive to the Applicant's Request for Continued Examination (RCE) filed 11/28/2006. In virtue of this Request, claims 1-13 and 16 were canceled, and claims 14-15 and 17-36 are currently presented in the instant application.

#### ***Petition filed 08/18/2006 under 37 CFR 1.137(b)***

1. The Applicant's petition filed under 37 CFR 1.137(b) on 08/18/2006 has been granted. The decision was made by the Office of Petitions.

#### ***Request for Continued Examination (RCE) entry***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Furthermore, the Applicant's petition filed under 37 CFR 1.137(b) to revive the application was granted by the Office of Petitions. Accordingly, Applicant's submission filed on November 28, 2006 has been entered.

#### ***Drawings Objections***

3. The drawings filed June 22, 2001 are objected to because Figs. 24, 25, and 26 are not provided with uniform drawing lines. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be

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canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification Objections***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation " $0 \leq D \leq 1$ " recited in line 8 of claim 14.

#### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.*

7. Claims 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 14, the phrase "where  $0 \leq D \leq 1$ " recited in line 8 renders the claim indefinite since it is not clear whether or not D is equal to or greater than zero and D is smaller

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than or equal to 1. If it is true, using a mathematically algebraic sign such as " $\leq$ " is suggested.

Clarification is required.

Claim 15 is also rejected under 35 U.S.C. 112, second paragraph, since it is dependent on claim 14.

*Allowable Subject Matter*

8. Claims 17-36 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- An electronic ballast for driving a gas discharge lamp comprising a cat ear power supply for supplying power to the control circuit, said power supply adapted to draw power from the supply of sinusoidal alternating current power only during a predetermined portion of each half-cycle of the sinusoidal alternating current power, in combination with the remaining claimed limitations as called for in independent claim 17 (claims 18-24 are allowed since they are dependent on claim 17);
- An electronic ballast for driving a gas discharge lamp comprising a valley fill circuit for receiving the rectified direct current bus voltage and maintaining the bus voltage above a predetermined minimum voltage, said valley fill circuit including an energy storage element, an impedance, and a switch, said energy storage element adapted to be connected between said bus voltage and a circuit common by means of said impedance when said switch is in a first predetermined conductive state so as to store energy, in combination with the remaining claimed limitations as called for in

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independent claim 25 (claims 26-31 are allowed since they are dependent on claim 25);

- An electronic ballast for driving a gas discharge lamp, the improvement comprising a power supply operatively connected to draw power from said supply of sinusoidal alternating current power, said power supply further operatively connected to supply power to said control circuit, said power supply being the sole source of power for said control circuit, in combination with the remaining claimed limitations as called for in independent claim 32 (claim 33 is allowed since it is dependent on claim 32); and
- A method for causing an electronic ballast comprising the steps of providing a power supply in said ballast for drawing current from said source of sinusoidal alternating current power during a predetermined portion of each half-cycle of said sinusoidal alternating current power, in combination with the remaining claimed limitations as called for in independent claim 34;
- In an electronic ballast, a method for decreasing ballast input current total harmonic distortion and reducing lamp current crest factor comprising within each said half-cycle, varying the conduction of the first controllably device in a predetermined manner so that the energy storing device draws more current from the AC supply during the middle portion of each said half-cycle, and less current from the AC supply during the beginning and ending portions of each said half-cycle, in combination with the remaining claimed limitations as called for in independent claim 35; and

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- In an electronic ballast, including a valley-fill circuit having an energy storing device, a method for decreasing ballast input current total harmonic distortion comprising the steps of, within each half-cycle of the AC power supply voltage, varying the conduction of the first controllably device in a predetermined manner so that the energy storing device draws more current from the AC supply during the middle portion of each said half-cycle, and less current from the AC supply during the beginning and ending portions of each said half-cycle, in combination with the remaining claimed limitations as called for in independent claim 36.

***Remarks on defective claims 14 and 15***

10. Claims 14 and 15 are not being provided herein rejection(s) over art nor indicated allowable subject matter since claim 14 is defective.

***Citation of relevant prior art***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Prior art Zinkler et al. (U.S. Patent No. 6,515,437 B1) discloses a power supply for hybrid illumination system;

Prior art Weng (U.S. Patent No. 5,986,901) discloses a power factor correction circuit for a power supply; and

Prior art Ukita et al. (U.S. Patent No. 5,434,474) discloses a lighting apparatus for discharge lamp.

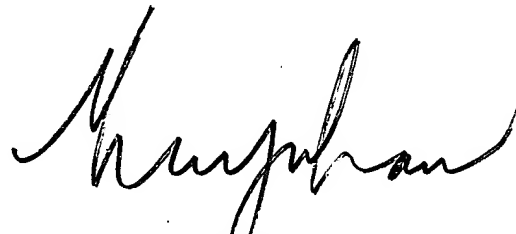
***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

01/20/2006

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over a horizontal line.

**THUY V. TRAN  
PRIMARY EXAMINER**